

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ferreed ~~Ferreed~~ sorbent ~~involving~~ having a ferromagnetic core, with one of a single layer coat, a ~~[[or]]~~ double layer coat ~~or with~~ and no coat, ~~distinguished by that~~ comprising: the core ~~[[is]]~~ made in a ~~the~~ form of a flake~~[[,]]~~ with the dimensions in a plane of (500-5000) mc and with a ~~the~~ thickness of ~~(0,1-1000)~~ (0.1-1000) mc.

2. (Currently Amended) The ferreed ~~Ferreed~~ sorbent as ~~per paragraph 1 distinguished by that~~ of claim 1 wherein the core is made ~~either~~ of one of iron, ~~[[or]]~~ iron oxides, ~~[[or]]~~ nickel, ~~[[or]]~~ iron-nickel alloy, iron-titanium alloy, or iron or nickel -titanium alloy, or iron or iron-tantalum alloy, nickel-tantalum alloy, [[or]] iron-nickel-titanium alloy, [[or]] and iron-nickel-tantalum alloy.

3. (Currently Amended) The ferreed ~~Ferreed~~ sorbent of claim 2, wherein a ~~as per any of paragraphs 1-2 distinguished by that the~~ one-layer coat is made of one of ~~either~~ carbon, ~~[[or]]~~ aluminium oxides, ~~[[or]]~~ disilcon oxide, ~~[[or]]~~ zirconium dioxide, ~~[[or]]~~ dextrane, ~~e.g. of~~ sephadex, ~~[[or]]~~ gelatin, ~~[[or]]~~ albumin, ~~[[or]]~~ polysaccharide, ~~e.g. of~~ amylum, ~~[[or]]~~ ion-exchange resins, ~~e.g.~~ cations ~~[[or]]~~ and anions.

4. (Currently Amended) The ferreed Ferreed sorbent of claim 2, wherein a as per any of paragraphs 1-2 distinguished by that in the double-layer coat the first closest to the core (inner) has an inner layer [[is]] made of either one of carbon, [[or]] aluminium oxides, [[or]] disilcon oxide, [[or]] and zirconium dioxide, and the second (outer) an outer layer of the coat is made either of one of [[or]] dextrane, e.g. of sephadex, [[or]] gelatin, [[or]] albumin, [[or]] polysaccharide, e.g. of amylum, [[or]] ion-exchange resins, e.g. cations [[or]] and anions.

5. (Currently Amended) The ferreed Ferreed sorbent according to claim 4, wherein as per any of paragraphs 1, 3-4 distinguished by that the outer layer of the coat is made by either one of conjugation with antibodies, [[or]] modification with a pharmaceutical preparation, e.g. including one of antibiotics, [[or]] phthalhydrazide salines, e.g. 5-amino-2,3-dihydro-1,4-dione salines, or made and fermented e.g. with urease.

6. (Currently Amended) The Method of extraction of ferreed sorbent as per any of paragraphs 1-2, distinguished by that the of claim 2, wherein a method for extracting the ferreed sorbent includes: a powder of either at least one of iron, or/and nickel, or/and titanium, or/and and tantalum is at least one of volatiled or/and and fused in a low-temperature plasma at a first with the temperature of  $10^4 \times ([0,5])$  0.5-5°K, and the at least

~~one of~~ received vaporous ~~or/and being in the form of~~ and fused particles of ~~the~~  
one of respected metals ~~[[or]]~~ product and respected metals alloys product is  
 quenched and condensed in a gas flow ~~e.g. argon flow~~, and then the product is  
 precipitated in ~~the~~ a form of one of crystals ~~or, correspondingly, as~~ and  
 respected metals alloys microbars, is transferred into ~~the~~ a dispersion medium  
 containing stabilizer. ~~E.g. water and/or oil~~, and while being mixed, ~~it is~~  
 sustained ~~there~~ within (5-15) hours at ~~the~~ a second temperature of (50-90)°C  
 and at ~~the~~ a residual pressure of (1-5) MmHg ~~till the~~ until an end of a gas  
 liberation, ~~after that~~ then the one of the crystals ~~[[or]]~~ and the microbars are  
 treated by flattening ~~e.g. by pressing, till they get to~~ into flakes of ~~the~~ a  
 specified thickness~~[[,]]~~ which then repeatedly (up to 10 times) are washed in  
 distilled water and then ~~flakes weak parts~~ of the flakes are removed by  
 exposing to ultrasound ~~(e.g. in water) of e.g. at a~~ (200-300) Vt/cm<sup>2</sup> intensity,  
 then ~~the~~ received flakes are dried ~~out e.g. in a hot air sterilizer at~~ a third  
 temperature of (80-110)°C, ~~after that the~~ then dried flakes are fractionated in  
~~either~~ one of an inert gas flow with ~~the~~ a velocity of ~~(0,02-1,00)~~ (0.02-1.00)  
 m/s at ~~the~~ an exposure of a magnetic field with ~~the~~ an intensity of (10-10<sup>3</sup>)  
 A/m ~~or using e.g. and by~~ centrifugation, and then ~~the~~ sorbent cores of a  
 specified dimensions are educed, on which coats are formed layer-by-layer,  
 and ~~the~~ a received end product is packed in a light-proof hermetically sealed  
~~containers, container and~~ sterilized ~~by e.g. U-rays, at that the~~ and a sorbent is  
 received ~~right after fractionation can be chosen as~~ is the end product as well.

7. (Currently Amended) ~~The Method of extraction of~~  
ferreed sorbent ~~as per paragraph of claim 6, distinguished by that the~~ wherein  
a first closest layer to the a core layer of the coat is formed by thermal  
treatment of the fractionated flakes at ~~the temperature of~~ (1000-1500)° C in the  
inert gas flow ~~of e.g. argon~~ containing microparticles of one of carbon, ~~[[or]]~~  
silicon oxide, ~~[[or]]~~ aluminium oxide, ~~[[or]]~~ and zirconium oxide.

8. (Currently Amended) ~~The Method of extraction of~~  
ferreed sorbent ~~as per paragraph of claim 6, distinguished by that the~~ wherein  
a first layer of the coat is formed though mixing with using an ultrasound  
exposure to the fractionated flakes suspension within (1-10) minutes in a  
heated aqueous solution of one of dextrane ~~[[or]]~~, gelatin, ~~[[or]]~~ albumin,  
~~[[or]]~~ and amylum up to ~~the temperature~~ (30-80)° C with subsequent  
quenching of the ~~above~~ suspension down to ~~the temperature of~~ (4-10)° C, and  
the a received precipitate is filled up with a formalin~~[[,]]~~ and sustained ~~in there~~  
therein within (10-40) minutes while simultaneously mixing, ~~after that it then~~  
is thoroughly [dried] dried out at ~~the temperature of~~ (25-50)° C, and is  
grinded, and the received ~~sorbent capsules~~ ~~[[([)]end product([)]]~~ are is filtered  
in a magnetic field.

9. (Currently Amended) ~~Method as per paragraph~~ The  
ferreed sorbent of claim 6, distinguished by that wherein the first layer of the

coat is formed ~~though~~ by adding an ion-exchange resin ~~e.g. of amberlite~~ into ~~the~~ suspension of fractionated flakes in distilled water ~~heated up to the~~ ~~temperature of~~ at (40-60)° C, with subsequent cooling of the above suspension down to the temperature of (15-30)° C[[,]] and adding ~~in there~~ nitrous acid (HNO<sub>2</sub>) diluted in water, sustaining within (10-15) minutes, cooling down to ~~the temperature of~~ (4-10)° C and extracting of a precipitate which then is washed in the physiological solution, and buffered in an aqueous solution of a blend of NH<sub>4</sub> OH foundation and NH<sub>4</sub>Cl saline.

10. (Currently Amended) The ferreed sorbent of claim  
6, wherein Method per paragraph 6, distinguished by that the second layer of the coat is formed though mixing ~~with using~~ by ultrasound exposure within (1-10) minutes to a ferromagnetics suspension covered with one of carbon [[or]], silicon oxide, [[or]] aluminium oxide, [[or]] and zirconium oxide coating in ~~heated up to the temperature of~~ a (30-80)° C aqueous solution of one of dextrane, [[or]] gelatin, [[or]] albumin, [[or]] and amylum with subsequent cooling of the ~~above~~ suspension ~~down to the temperature of~~ (4-10)° C, and the received precipitate is filled up with formalin[[,]] and sustained ~~in there~~ therein within (10-40) minutes while simultaneously being mixed, and ~~after that it~~ then is thoroughly dried out at ~~the temperature of~~ (25-50)° C, and grinded and the received ~~sorbent capsules (the end product[[]])~~ are is filtered in a magnetic field.

11. (Currently Amended) The ferreed sorbent of claim  
6, wherein Method per paragraph 6, distinguished by that the second layer of  
the coat is formed ~~though~~ by adding an ion-exchange resin ~~e.g. of amberlite~~  
into suspension in distilled water of ferromagnetics covered with one of a  
carbon ~~[[or]]~~, silicon oxide, ~~[[or]]~~ aluminium oxide, ~~[[or]]~~ and zirconium  
oxide coating~~[[,]]~~ heated ~~[[up]]~~ to ~~the temperature of~~ (40-60) ° C, with  
subsequent cooling of the ~~above~~ suspension down to ~~the temperature of~~  
(15-30)° C, and adding~~[[,]]~~ while it ~~is~~ being mixed~~[[,]]~~ albumin ~~e.g. in the~~  
~~form of serum~~ with subsequent adding ~~in there~~ of nitrous acid (HNO<sub>2</sub>) diluted  
in water, sustaining within (10-15) minutes, cooling down to ~~the~~  
~~temperature of~~ (4-10)° C and extracting ~~[[of]]~~ a precipitate which then is  
activated by sustaining within ~~(1,5-2)~~ (1.5-2) hours in a modifier solution,  
washed in a physiological solution, and buffered ~~till it gets to reach a~~ pH  
~~4,0-0,5~~ 4.0-0.5 in an aqueous solution of a blend of NH<sub>4</sub> OH foundation and  
NH<sub>4</sub>Cl saline.

12. (Currently Amended) The farreed sorbent of claim 11,  
wherein one of a Method per paragraph 11, distinguished by that sodium periodate  
(NaIO<sub>4</sub>) ~~[[or]]~~ and a glutaric dialdehyde in (3-10)% aqueous solution of Na<sub>2</sub>SO<sub>4</sub>  
~~can be~~ is used as a modifier.

Based Upon: PCT/RU2004/000366

13. (Currently Amended) The farreed sorbent of claim 11,  
~~wherein Method as per any of paragraphs 6-11, distinguished by that~~ while forming  
[[of]] the outer layer of the coat [[it]] the outer layer is conjugated with antibodies  
~~by through~~ adding into the aqueous suspension of ferreed sorbent with one [[or]] of  
the single layer coating and the double layer coating, ~~(but with the outer layer is~~  
made of one of sephadex [[or]] and albumin[[,]] and modified with ~~e.g. one of~~  
glutaric dialdehyde [[or]] and sodium periodate[[,]] of serum, ~~e.g. of blood~~  
containing antibodies specific to the an antigen being sorbed ~~e.g. to systemic lupus~~  
~~erythematosus antigen,~~ in a buffered fluid with a pH of [[6,5]]6.5-10, further  
sustaining [[of]] the ~~above~~ composition while it is being mixed within (1-3) hours at  
~~the temperature of~~ (15-25)° C, subsequent subsequently adding [[of]] sodium  
borhydrate into the composition, cooling ~~down to the temperature of~~ (4-10)° C, and  
repeated sustaining while mixing within (1-3) hours, extraction of the precipitate  
and its buffering and drying out.

14. (Currently Amended) The farreed sorbent of claim 11,  
~~wherein Method as per any of paragraphs 6-11, distinguished by that~~ while forming  
[[of]] the outer layer of the coat [[it]] the outer layer is modified by a  
pharmaceutical preparation ~~through~~ by heating the suspension of the ferreed sorbent  
with the one of the single layer coating and the one or double layer coating,  
~~(but with the outer layer made of e.g. one of~~ dextrane [[or]] and gelatin[[,]]) heated



Based Upon: PCT/RU2004/000366

~~[[up]] to the temperature of (35-70)° C in a physiological solution[[,]] and adding in there of a pharmaceutical preparation powder, e.g. of antibiotics, e.g. oxaceillin, and sustaining while thoroughly being mixed at the above temperature within (0,5-2,5) (0.5-2.5) hours, consequent then cooling [[of]] the compound down to the temperature (4-10)° C, decanting of the a supernatant fluid in a magnetic field, and washing [[of]] the precipitate in running distilled water and its consequent then drying out.~~

15. (Currently Amended) The farreed sorbent of claim 11,  
~~wherein Method as per any of paragraphs 6-11, distinguished by that while forming [[of]] the outer layer of the coat [[it]] the outer layer is modified through preliminary dilution of urease crystals in a polyether, e.g. in dibenzo-18-crown-6, immixture of the above composition with suspension in distilled water of the ferreed sorbent with the coating made e.g. of sephadex, consequent then sustaining while being mixed at the temperature of (25-40)° C within (2-5) hours and cooling down to the temperature of (4-10)° C, consequent then adding [[of]] a formaldehyde and repeated sustaining within (1-3) hours, and removal of a supernatant fluid under exposure of a magnetic field and then precipitate drying out.~~



Based Upon: PCT/RU2004/000366

16. (Currently Amended) The ferreed sorbent of claim 11,  
wherein Method as per any of paragraphs 6-11, distinguished by that while forming  
[[of]] the outer layer of the coat [[it]] the outer layer is modified through heating of  
an aqueous suspension of the ferreed sorbent with the coating made of e.g. dextrane,  
up to ~~the temperature of~~ (40-70)° C, with subsequent immixturing with one of  
zirconium saline powder, ~~e.g. of respective~~ and phthalhydrazide saline, and a  
(50-120) Vt/cm intensity ultrasound exposure within (1-10) minutes, cooling of the  
received blend ~~down to the temperature of~~ (4-10)° C, adding the formaldehyde,  
sustaining while it is being mixed within (1-3) hours, and removal of supernatant  
fluid under the exposure of a magnetic field and then ~~precipitate~~ drying out the  
precipitate.

17. (New) The ferreed sorbent of claim 1, wherein a  
one-layer coat is made of one of carbon, aluminium oxides, disilcon oxide,  
zirconium dioxide, dextrane, sephadex, gelatin, albumin, polysaccharide, amylum,  
ion-exchange resins, cations and anions.

Based Upon: PCT/RU2004/000366

18. (New) The ferreed sorbent of claim 1, wherein a double-layer coat has an inner layer made of one of carbon, aluminium oxides, disilicon oxide, and zirconium dioxide, and an outer layer of the coat is made of one of dextrane, sephadex, gelatin, albumin, polysaccharide, amylum, ion-exchange resins, cations and anions.

19. (New) The ferreed sorbent according to claim 1, wherein an outer layer of the coat is made by one of conjugation with antibodies, modification with a pharmaceutical preparation, including one of antibiotics, phthalhydrazide salines, 5-amino-2,3-dihydro-1,4-dione salines, and fermented.

20. (New) The ferreed sorbent of claim 1, wherein a method for extracting the ferreed sorbent includes: a powder of at least one of iron, nickel, titanium, and tantalum is at least one of volatiled and fused in a low-temperature plasma at a first temperature of  $10^4 \times (0.5-5)^\circ\text{K}$ , and at least one of received vaporous and fused particles of one of respected metals product and respected metals alloys product is quenched and condensed in a gas flow, and then the product is precipitated in a form of one of crystals and respected metals alloys microbars, is transferred into a dispersion medium containing stabilizer and while being mixed is sustained within (5-15) hours at a second temperature of  $(50-90)^\circ\text{C}$  and at a residual pressure of (1-5) MmHg until an end of a gas liberation, then the one of the crystals

Based Upon: PCT/RU2004/000366

and the microbars are treated by flattening into flakes of a specified thickness which then repeatedly (up to 10 times) are washed in distilled water and then weak parts of the flakes are removed by exposing to ultrasound at a  $(200-300) \text{ Vt/cm}^2$  intensity, then received flakes are dried in a hot air sterilizer at a third temperature of  $(80-110)^\circ\text{C}$ , then dried flakes are fractionated in one of an inert gas flow with a velocity of  $(0.02-1.00) \text{ m/s}$  at an exposure of a magnetic field with an intensity of  $(10-10^3) \text{ A/m}$  and by centrifugation, and then sorbent cores of a specified dimensions are educed, on which coats are formed layer-by-layer, and a received end product is packed in a light-proof hermetically sealed container and sterilized, and a sorbent received after fractionation is the end product.

21. (New) The ferreed sorbent of claim 20, wherein a first closest layer to a core layer of the coat is formed by thermal treatment of the fractionated flakes at  $(1000-1500)^\circ \text{C}$  in the inert gas flow containing microparticles of one of carbon, silicon oxide, aluminium oxide, and zirconium oxide.

22. (New) The ferreed sorbent of claim 20, wherein a first layer of the coat is formed though mixing using an ultrasound exposure to the fractionated flakes suspension within  $(1-10)$  minutes in a heated aqueous solution of one of dextrane, gelatin, albumin, and amylum up to  $(30-80)^\circ \text{C}$  with subsequent quenching of the suspension down to  $(4-10)^\circ \text{C}$ , and a received precipitate is filled

Based Upon: PCT/RU2004/000366

up with a formalin and sustained therein within (10-40) minutes while simultaneously mixing, then is thoroughly dried out at (25-50)° C, and is grinded, and the received end product is filtered in a magnetic field.

23. (New) The ferreed sorbent of claim 20, wherein the first layer of the coat is formed by adding an ion-exchange resin into the suspension of fractionated flakes in distilled water at (40-60)° C, with subsequent cooling of the above suspension down to the temperature of (15-30)° C and adding nitrous acid (HN0<sub>2</sub>) diluted in water, sustaining within (10-15) minutes, cooling down to (4-10)° C and extracting of a precipitate which then is washed in the physiological solution, and buffered in an aqueous solution of a blend of NH<sub>4</sub> OH foundation and NH<sub>4</sub>Cl saline.

24. (New) The ferreed sorbent of claim 20, wherein the second layer of the coat is formed though mixing by ultrasound exposure within (1-10) minutes to a ferromagnetics suspension covered with one of carbon, silicon oxide, aluminium oxide, and zirconium oxide coating in a (30-80)° C aqueous solution of one of dextrane, gelatin, albumin, and amylum with subsequent cooling of the suspension to (4-10)° C, and the received precipitate is filled up with formalin and sustained therein within (10-40) minutes while simultaneously being mixed, and

Based Upon: PCT/RU2004/000366

then is thoroughly dried out at (25-50)° C, and grinded and the received end product is filtered in a magnetic field.

25. (New) The ferreed sorbent of claim 20, wherein the second layer of the coat is formed by adding an ion-exchange resin into suspension in distilled water of ferromagnetics covered with one of a carbon, silicon oxide, aluminium oxide, and zirconium oxide coating heated to (40-60)° C, with subsequent cooling of the suspension down to (15-30)° C, and adding while being mixed albumin with subsequent adding of nitrous acid (HNO<sub>2</sub>) diluted in water, sustaining within (10-15) minutes, cooling down to (4-10)° C and extracting a precipitate which then is activated by sustaining within (1.5-2) hours in a modifier solution, washed in a physiological solution, and buffered to reach a pH 4.0-0.5 in an aqueous solution of a blend of NH<sub>4</sub> OH foundation and NH<sub>4</sub>Cl saline.

26. (Currently Amended) The farreed sorbent of claim 25, wherein one of a sodium periodate (NaIO<sub>4</sub>) and a glutaric dialdehyde in (3-10)% aqueous solution of Na<sub>2</sub>SO<sub>4</sub> is used as a modifier.

27. (New) The farreed sorbent of claim 20, wherein while forming the outer layer of the coat the outer layer is conjugated with antibodies by adding into the aqueous suspension of ferreed sorbent with one of the single layer

Based Upon: PCT/RU2004/000366

coating and the double layer coating, the outer layer is made of one of sephadex and albumin and modified with one of glutaric dialdehyde and sodium periodate of serum containing antibodies specific to an antigen being sorbed in a buffered fluid with a pH of 6.5-10, further sustaining the composition while being mixed within (1-3) hours at (15-25)° C, subsequently adding sodium borhydrate into the composition, cooling to (4-10)° C, and repeated sustaining while mixing within (1-3) hours, extraction of the precipitate and its buffering and drying out.

28. (New) The farreed sorbent of claim 20, wherein while forming the outer layer of the coat the outer layer is modified by a pharmaceutical preparation by heating the suspension of the ferreed sorbent with the one of the single layer coating and the double layer coating, the outer layer made of one of dextrane and gelatin heated to (35-70)° C in a physiological solution and adding a pharmaceutical preparation powder and sustaining while thoroughly being mixed at (0.5-2.5) hours, then cooling the compound to (4-10)° C, decanting of a supernatant fluid in a magnetic field, and washing the precipitate in running distilled water and then drying out.

29. (New) The farreed sorbent of claim 20, wherein while forming the outer layer of the coat the outer layer is modified through preliminary dilution of urease crystals in a polyether, immixture of the composition with

Based Upon: PCT/RU2004/000366

suspension in distilled water of the ferreed sorbent with the coating made of sephadex, then sustaining while being mixed at (25-40)°C within (2-5) hours and cooling to (4-10)° C, then adding a formaldehyde and repeated sustaining within (1-3) hours, and removal of a supernatant fluid under exposure of a magnetic field and then precipitate drying out.

30. (New) The farreed sorbent of claim 20, wherein while forming the outer layer of the coat the outer layer is modified through heating of an aqueous suspension of the ferreed sorbent with the coating made of dextrane, up to (40-70)° C, with subsequent immixturing with one of zirconium saline powder and phthalhydrazide saline, and a (50-120) Vt/cm intensity ultrasound exposure within (1-10) minutes, cooling of the received blend to (4-10)°C, adding the formaldehyde, sustaining while being mixed within (1-3) hours, and removal of supernatant fluid under the exposure of a magnetic field and then drying out the precipitate.